

- France. Académie des sciences. Comptes rendus. Paris. Tome 170. 1920.*
- Boutaric, A. Sur l'intensité du rayonnement nocturne aux altitudes élevées. p. 1195-1196. (17 mai.) [Abstract in this REVIEW, p. 284.]
- Rothé, E. Sur un anémomètre à oscillations électriques. p. 1197-1198. (17 mai.)
- Dunoyer, L., & Reboul, G. Sur la pratique de la prévision du temps. p. 1275-1277. (25 mai.) [The combination of rules with weather map indications.]
- Trillat, A., & Mallain. Sur le sort des projections microbiennes dans l'air. Influence de l'humidité. p. 1291-1293. (25 mai.)
- Guilbert, Gabriel. Sur l'application des cirrus à la prévision du temps. p. 1398-1399. (7 juin.) [Abstract in this REVIEW, p. 285.]
- Meteorologische Zeitschrift. Braunschweig. Band 37. Januar-Februar 1920.*
- Schmauss, A[ugust]. Kolloidchemie und Meteorologie. p. 1-8.
- Wegener, Alfred. Frostübersättigung und Cirren. p. 8-12.
- Schirrmann, Marie Anna. Neue theoretische Untersuchungen über die Polarisation des Lichtes an trüben Medien und deren Konsequenzen für die Probleme der atmosphärischen Polarisation. p. 12-22.
- Ekman, V. Walfrid. Über den Bergriff der stabilen Schichtung. p. 22-26.
- Spath, W. Die Sciroccos der Sinaiwüste. p. 26-29.
- Müller, Max. Zur Wirkung überadiabatischer Temperaturgradienten. p. 30-31.
- Reger, J. Zur Frage der überadiabatischen Temperaturgradienten. p. 31-32.
- Grosse, [W]. Die Beaufortskala. p. 32-36.
- Hellmann, G[ustav]. Ursprung der hundertteiligen Thermometerskala. p. 36.
- Meteorologische Zeitschrift. Braunschweig. Band 37. Januar-Februar 1920—Continued.*
- Heidke, P[aul]. Arithmetische Glättung von Zahlenreihen. p. 36-37.
- Perlewitz, P[aul]. Wärmeprgnose. p. 37-38.
- Hann, Julius] v. Bemerkenswerte, in Stundenintervallen sich folgende Gewitterzüge. p. 38-39.
- Köppen, W[ladimir]. Verhältnis der Baumgrenze zur Lufttemperatur. p. 39-42.
- Ficker, H[einrich]. Veränderlichkeit der Temperatur und Anomalie der Monatsmittel. p. 42-43.
- Schulz, J. F. Herm. Schneedecke und Winterkälte. p. 44.
- Hemel en dampkring. Den Haag. 17 jaargang. 1920.
- Borgesius, A. H. Avond- en morgenrod als weertekens. p. 145-151. (Februari.)
- Van Dijk, G. Ontploffingen en de voortplanting der beweging. p. 182-188.
- Hemel en dampkring. Den Haag. 18 jaargang. mei 1920.
- Van Dijk, G. Ontploffingen en de voortplanting der beweging. p. 1-7. [Conclusion.]
- Vliegtuigwaarnemingen te Soesterberg. p. 7-9.
- Sociedad astronómica de España y America. Revista. Año 10. Enero-abril 1920.*
- Sagristá, José. El Principe Boris Galitzin y su obra científica en sismología. p. 1-7.
- Selga, Miguel. La curva de la frecuencia de la nubosidad de Baguio. p. 28-30.
- Revista agricultura. San Juan, Puerto Rico. v. 4. Marzo 1920.*
- Fassig, Oliver L. Trabajo del negociado meteorológico federal en las Antillas. p. 49-51. [Cf. MONTHLY WEATHER REVIEW, Dec., 1920, 47:850-851.]

SPECIAL OBSERVATIONS.

SOLAR AND SKY RADIATION MEASUREMENTS DURING MAY, 1920.

By HERBERT H. KIMBALL, Professor of Meteorology.

[Dated: Solar Radiation Investigations Section, Washington, July 1, 1920.]

For a description of instruments and exposures, and an account of the method of obtaining and reducing the measurements, the reader is referred to this REVIEW for April, 1920, 48: 225.

The monthly means and departures from normal in Table 1 indicate that solar radiation intensities were generally above normal except at Lincoln, Nebr. At this station the average cloudiness for the month was 76 per cent, and on only two days did the cloudiness average less than 50 per cent.

As a result of this unusually cloudy condition, Table 2 shows a deficiency in the total radiation received on a horizontal surface at Lincoln during the four weeks April 30 to May 27, inclusive. At Madison all the weeks except the one beginning May 7 show an excess of radiation, while at Washington weeks with excess and deficiency of radiation alternate.

Skylight polarization measurements obtained at Washington on six different days give a maximum of 64 per cent and a mean for the month of 57 per cent. Measurements obtained at Madison on nine days give a maximum of 67 per cent and a mean of 56 per cent. These are above the average values for May at Washington, and slightly above at Madison.

TABLE 1.—*Solar radiation intensities during May, 1920.*

[Gram-calories per minute per square centimeter of normal surface.]

WASHINGTON, D. C.

Date.	Suns zenith distance.										Local mean solar time.	
	75th meridian time.	Air mass.										
		A. m.				1.0*	P. m.					
		e.	5.0	4.0	3.0	2.0	2.0	3.0	4.0	5.0	e.	
May 1.....	mm.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mm.	
3.....	4.95	.....	.....	.....	.....	1.44	.....	.....	.....	.....	3.81
5.....	4.57	.....	.....	.....	.....	1.22	.....	.....	.....	.....	4.17
6.....	6.50	0.61	0.72	0.88	0.98	1.17	1.39	1.02	0.81	0.69	4.57	
10.....	4.95	0.68	0.83	0.95	1.07	1.39	1.34	1.02	0.81	0.69	3.99	
15.....	7.57	.....	.....	.....	.....	0.84	.....	.....	.....	.....	5.36
15.....	5.16	0.73	0.93	1.13	1.37	1.34	1.37	1.02	0.81	0.69	3.99	
17.....	6.50	0.81	0.84	0.94	1.13	1.28	1.34	1.02	0.81	0.69	4.37	
22.....	9.14	0.73	0.84	0.96	1.14	1.34	1.34	1.02	0.81	0.69	6.76	
27.....	10.21	0.52	0.59	0.74	0.92	1.16	1.16	1.02	0.81	0.69	10.21	
28.....	11.38	.....	.....	.....	.....	1.10	1.10	1.02	0.81	0.69	12.24
29.....	8.81	.....	.....	.....	.....	1.25	1.25	1.02	0.81	0.69	6.76
Means.....	.....	0.67	0.76	0.90	1.07	1.32	(1.06)	(0.81)	(0.69)	.....	.....
Departures.....	+0.06	+0.04	+0.09	+0.09	+0.03	+0.03	+0.07	+0.02	-0.01	.....	.....

* Extrapolated.

TABLE 1.—*Solar radiation intensities during May, 1920—Continued.*
MADISON, WIS.

Date.	Suns zenith distance.											
	8 a.m.	78.7	75.7	70.7	60.0	0.0	60.0	70.7	75.7	78.7	Noon.	
	75th meridian time.	Air mass.									Local mean solar time.	
e.	A. m.				P. m.					e.		
	5.0	4.0	3.0	2.0	1.0*	2.0	3.0	4.0	5.0	e.		
May 8.	mm.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mm.		
14.	7.04				1.02	1.29	1.04	0.83		5.79		
19.	3.81					1.34				4.17		
20.	8.48					1.38				6.27		
21.	5.16					1.38				8.18		
22.	6.27					1.38				7.04		
24.	7.87				0.93	1.44	1.21			8.48		
25.	9.83					1.44	1.01			7.57		
29.	6.27					1.05	1.18	1.35			5.79	
Means.					(0.99)	(1.10)	1.37	1.09 (0.83)				
Departures.					+0.08 ± 0.00	+0.03 +0.05	-0.08					

LINCOLN, NEBR.

May 8.	6.76				0.79					6.02	
21.	7.87				1.23					8.81	
Means.					(1.01)						
Departure.					-0.13						

SANTA FE, N. MEX.

May 1.	2.74		1.05	1.17	1.42	1.60				2.49	
4.	1.88			1.27	1.44	1.61	1.42	1.27	1.18	3.15	
6.	1.78	1.06	1.21	1.33	1.44	1.61				2.49	
7.	2.36	0.91	1.01	1.11	1.28					6.50	
18.	3.81			1.06	1.20	1.30	1.50			4.17	
20.	3.81			1.06	1.20	1.30	1.50			3.30	
24.	7.29		0.98	1.12						5.36	
28.	6.50			1.08			1.34			4.75	
29.	6.02		1.06	1.17	1.31	1.57	(1.38)	(1.27)	(1.18)	4.95	
Means.		(0.98)	1.06	1.19	1.35	1.57	(1.38)	(1.27)	(1.18)		
Departures.		-0.03 ± 0.00	+0.02 +0.06	+0.05 +0.14		-0.07					

* Extrapolated.

TABLE 2.

Week beginning	Average daily radiation.			Average daily departure for the week.			Excess or deficiency since first of year.		
	Wash- ington	Madi- son	Lin- coln	Wash- ington	Madi- son	Lin- coln	Wash- ington	Madi- son	Lin- coln
Apr. 30.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.
May 7.	605	516	404	104	64	47	1,247	-1,028	-2,665
May 14.	394	423	406	92	41	71	601	-1,318	-3,163
May 21.	513	505	367	23	31	135	759	-1,104	-4,106

MEASUREMENTS OF THE SOLAR CONSTANT OF RADIATION AT CALAMA, CHILE.

By C. G. ABBOT, Assistant Secretary.

(Smithsonian Institution, Washington, June 30, 1920.)

In continuation of preceding publications, I give in the following table the results obtained at Calama, Chile, in April, 1920, for the solar constant of radiation. The reader is referred to this REVIEW for February, August, and September, 1919, for statements of the arrangement and meaning of the table.

Date.	Solar con- stant.	Method. Grade.	Trans- mission coeffi- cient at 0.5 mi- cron.	Humidity.			Remarks.
				p/pSC.	V. P.	Rel. hum.	
1920.							
A. M.							
Apr. 1	1.937	E..... E-	0.842	0.358	cm. 0.39	Per cent. 35	
	1.938	M.....					
	1.952	M.....					
	1.944	M.....					
	1.944	W. M.					
	1.956	M..... S	.844	.367	.43	45	
	1.962	M.....					
	1.960	W. M.					
	1.961	M..... S-	.851	.540	.36	25	Cirri in east and west.
	1.961	M.....					
	1.956	W. M.					
	1.939	M..... S-	.855	.468	.34	30	Distant cirri in east and southwest.
	1.974	M.....					
	1.982	W. M.					
	1.984	M..... S-	.853	.597	.32	37	
	1.951	M.....					
	1.960	W. M.					
	1.942	E..... G+	.838	.508	.28	24	
	1.915	M.....					
	1.918	M.....					
	1.925	W. M.					
	1.902	M..... S	.863	.520	.27	21	
	1.921	M.....					
	1.922	M.....					
	1.916	W. M.					
	1.928	M..... S	.860	.518	.27	22	Cirri low in northeast.
	1.924	M.....					
	1.933	M.....					
	1.927	W. M.					
	1.965	E..... E	.848	.463	.32	30	
	1.955	M.....					
	1.961	M.....					
	1.956	M.....					
	1.960	W. M.					
	1.980	E..... E-	.866	.515	.36	32	
	1.964	M.....					
	1.960	M.....					
	1.963	M.....					
	1.961	W. M.					
	1.956	M..... S	.868	.678	.27	17	Thin cirri scattered over sky, especially in east.
	1.961	M.....					
	1.958	W. M.					
	1.950	M..... S-	.855	.568	.36	23	Cirri scattered about sky, preventing earlier observations.
	1.959	M.....					
	1.955	W. M.					
	1.967	E..... VG-	.854	.488	.31	30	Cirro-cumuli forming low in east. Cirri also appearing in northwest. Chuqui smoke in all observations.
	1.977	M.....					
	1.949	M.....					
	1.941	M.....					
	1.954	W. M.					
	1.964	E..... E	.864	.568	.26	26	Wind carried much dust at times.
	1.961	M.....					
	1.958	M.....					
	1.952	M.....					
	1.957	W. M.					
	1.930	M..... S	.861	.541	.25	22	Chuqui smoke interfered with M _s observations.
	1.944	M.....					
	1.959	M.....					
	1.944	W. M.					
	1.910	M..... S	.859	.528	.28	24	Some cirri in north. Chuqui smoke interfered with all observations.
	1.963	M.....					
	1.935	W. M.					
	1.939	M..... S	.832	.466	.29	33	Cirri in west extending east. Cirri approaching sun at M _s preventing further observations.
	1.950	M.....					
	1.946	W. M.					
	1.952	M..... S	.852	.433	.41	39	Chuqui smoke interfered.
	1.953	M.....					
	1.953	W. M.					
	1.950	E..... E	.845	.406	.38	33	
	1.956	M.....					
	1.944	M.....					
	1.944	W. M.					
	1.948	M.....					